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Internetworking products	**One year**
Ethernet Stackable Hubs and Unmanaged Ethernet Fixed Port Repeaters	**Lifetime*** **(One Year if not registered)**
***Power supply and fans in these stackable hubs and unmanaged repeaters**	**One Year**
Other hardware products	**One year**
Spare parts and spares kits **90 days**	

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23/12/93

LinkBuilder

How To Install And Use The

TP Transceiver Interface Module

3C12063

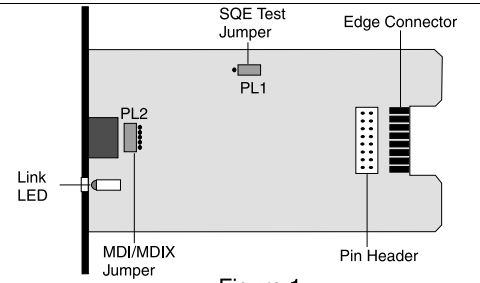

Figure 1

This manual details the installation and use of the 3Com TP Transceiver Interface Module, 3C12063. Please retain this manual with your other 3Com manuals for future use.

1 Interworking Information

The 3Com® LinkBuilder® TP Transceiver Interface Module has been designed to the IEEE 802.3 10BaseT specification.

The Transceiver Module can transmit and receive Ethernet 10 Mbit/sec traffic over Shielded or Unshielded Twisted Pair cable. The Transceiver Module features crossover (MDI/MDIX) switching, SQE Test selection and link monitoring using the Link LED (Light Emitting Diode).

The Transceiver Module is used to provide connectivity to twisted pair cable on the following LinkBuilder products:

- ECS modules (3C12076, and 3C12050/1)
- MSH modules (3C18110, 3C18120, 3C18124, 3C18146 and 3C18600)
- FMS Stackable Hubs (3C16250, 3C16265, 3C16271 and 3C16371)
- FMS II Stackable Hubs (3C16665, 3C16670, 3C16671 and 3C16672)

LinkBuilder TP/12 (3C16170) and LinkBuilder TP/8i (3C16181) hubs

Repeaters (3C16170, 3C16200, 3C16210 and 3C16505).

This product has the benefit of a "lifetime warranty", details of which are given on page 4 of this manual.

2 Setting up the Module

MDI/MDIX

The PL2 component switches the TP port between MDI and MDIX.

MDI is the default setting and allows the Transceiver Module to be connected by normal twisted pair cable to an MDIX port on another hub to form an inter-repeater link.

If MDIX is selected the Transceiver Module can be connected to a workstation or any other Data Terminal Equipment. It can also be connected to another hub which is already set to MDI to form an inter-repeater link.

See Figure 1 to locate the MDI/MDIX jumper and then Figure 2 to ensure you have the correct selection.

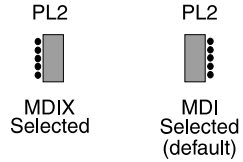

Figure 2

SQE Test

The PL1 component allows you to enable or disable the SQE Test. The SQE Test is used by 802.3 transceivers to confirm that the transceiver is functioning correctly. The function *must* be disabled for operation when installed in a Repeater. The function should be enabled for operation when connected to a LinkBuilder ECS Local Bridge Module 3C12050/1.

The Transceiver Module is supplied with SQE Test disabled.

See Figure 1 to locate the SQE Test jumper and then Figure 3 to ensure you have the correct selection.

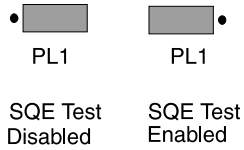

Figure 3

3 Installation

Only qualified personnel should install this device. Observe normal anti-static precautions! Use an earthed wrist-band!

A 16-pin header and a 16-way edge connector are mounted on the Transceiver Module for connection to a Module, Stackable Hub or Repeater.

A Twisted Pair cable can be connected to the RJ45 connector on the front of the Transceiver Module.

Remove the blanking plate from the unit in which you are going to install the Transceiver Module. The relevant manual will tell you where to find the plate.

Keep the blanking plate in a safe place so that it can be replaced if the Transceiver Module is removed.

Installing in a Stackable Hub or Repeater

For FMS Stackables and Repeaters, hold the mounting panel with the pin header side of the board down. See Figure 1 to locate the pin header.

For FMS II Stackables, hold the mounting panel with the pin header side of the board up.

Insert the edge connector end of the Transceiver Module into the rear of the mother device.

Slide the Transceiver Module in carefully to engage in the slot and push it fully home.

Fix the mounting panel of the Transceiver Module to the back panel using the two screws from the blanking plate.

Installing in an ECS or MSH Module

Before you install the Transceiver Module, you must remove the mother device from the network and all power sources. Modules must be removed from the Chassis (you do not need to power down the chassis first). The 3C18146 Expansion Module must be separated from its mother module. See the relevant '*How to Install and Use...*' manual.

Position the Module on a flat surface with the 16-way socket facing up. Hold the Transceiver Module by the mounting panel and board edge with the header pins facing down. See Figure 1 to locate the header pins. Pass the board of the Transceiver Module through the cut-out in the front panel. Align the socket on the Module with the pins on the Transceiver Module and push down firmly to connect.

With the 3C18146 Expansion Module, you align the header and pins and press gently to engage the pins. Turn the pair over to rest on the Transceiver Module and press firmly close to the header to complete connection.

Fix the mounting panel of the Transceiver Module to the module using the two screws from the blanking plate.

Connection

Before proceeding with the installation of the module, check that the host equipment is set up to take the module. See the relevant '*How to Install and Use...*' manual.

Re-install the mother device into its chassis and/or network.

Connect the Transceiver Module to the TP segment.

4 Operation

Link LED

The Link LED on the front of the Transceiver Module lights green when a link is detected. If a link is not present the LED does not light.

5 Problems

If the Link LED does not light when the Transceiver Module is installed the cause may be one of the following:

Both ends of the link are configured as MDI - change one to MDIX.

Both ends of the link are configured as MDIX - change one to MDI.

The far end device is not powered up or may be faulty. Check the device.

The cable linking the devices is broken or incorrectly wired. Change the cable.

Disclaimer

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Standards

The 3Com RJ45 Transceiver Module 3C12063 has been designed to comply with the following standards:

Functional:	PLS & AUI Specification ISO 8802.3 Sect. 7 & 10
Safety:	UL 1950, EN 60950, CSA 22.2 #950
E.M.C.	FCC Part 15 (Level A) EN55022 (Level A) VFG 243 (Level B) IEC 801 (Parts 2-6)
Environment	IEC68 Operating Temperature: 0 to 50^{0}C 32 to 122 ^{0}F Humidity - 10 to 90% Non Cond.

Radio Frequency Interference Statement

This equipment has been tested with a class A computing device and has been found to comply with part 15 of FCC Rules. Operation in a residential area may cause unacceptable interference to radio and TV receptions requiring the operator to take whatever steps are necessary to correct the interference.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur : "Appareils Numériques", NMB-003 édictée par le ministre des Communications.

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